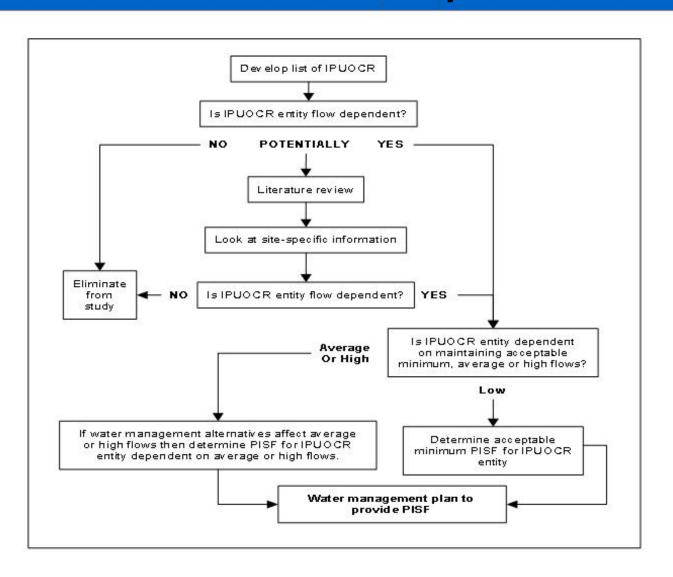
Overview of Flow
Dependent Resources,
Water Users, Dam Owners
and Multi-Criteria
Decision Analysis (MCDA)

- **University of New Hampshire**
 - Normandeau Associates
 - **University of Massachusetts**

October 22, 2004

IPUOCR Flow Dependence



Flow dependent resources

- Recreation
- Hydroelectric Energy
- Pollution Abatement
- Fowlers Toad
- Pied Billed Grebe
- Wood Turtle
- Osprey
- Common Loon
- Long's Bitter Cress
- Wild Garlic

- Emergent Wetlands
- Southern New England High Energy Riverbank
- Southern New England Floodplain Forest
- Fish and Fish Habitat
- Mussels
- Insects
- T/E Banded Sunfish
- River Morphology
- Public Water Supply

PISF to WMP

- Different resources dependent on different flows (low, average, high)
- Where possible, flows will be described in terms of frequency of occurrence and duration of events relative to benchmarks
- Multi-species approach will be used where appropriate
- Conflicts among resource needs and between resource needs and water user/dam owner needs will be identified, if present
- MCDA is one tool we will look at for resolving conflicts

Hydropower and Recreational Dams on the Designated Reach (Hydropower, Recreation)

WATERLOOM POND DAM

OTIS DAM

SOUHEGAN RIVER III DAM

SOUHEGAN RIVER

SOUHEGAN RIVER III DAM

PINE VALLEY MILL DAM

MCLANE DAM

SOUHEGAN RIVER DAM

SOUHEGAN RIVER DAM

SOUHEGAN RIVER DAM

GOLDMAN DAM

MERRIMACK VILLAGE DAM

NEW IPSWICH

GREENVILLE

GREENVILLE

GREENVILLE

WILTON

WILTON

MILFORD

NEW IPSWICH

WILTON

WILTON

MILFORD

MERRIMACK

Affected Water Users

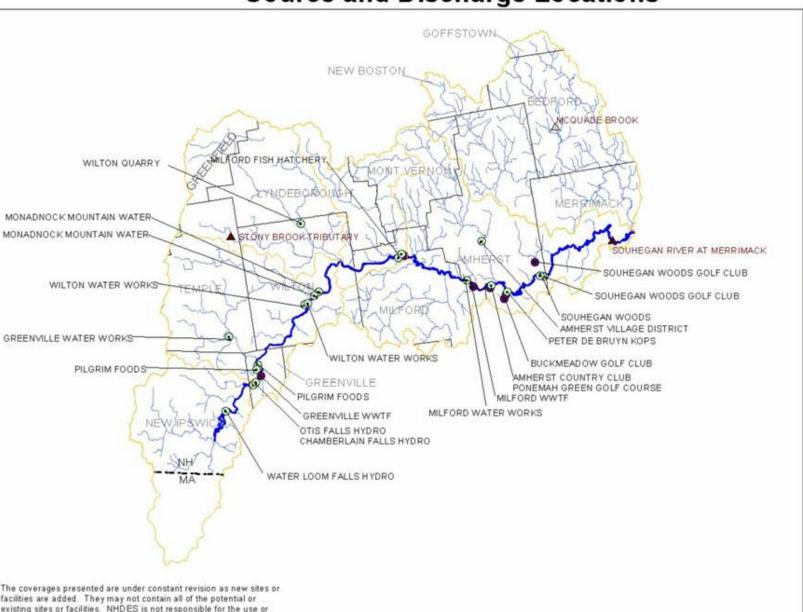
- Amherst Country Club
- Buckmeadow Golf Club
- Town of Greenville Water and WWTF
- Alden Greenwood Hydro Plants
- Town of Milford Water and WWTF
- Monadnock Springs
- Milford Fish Hatchery

- Pennichuck Water Works
- Peter De Bruyn Kopps
- Pike Industries
- Pilgrim Foods
- Ponemah Green Golf Course
- Souhegan Woods Golf Club
- Wilton Water Works

Types of Water Users and Dam Owners

- Golf Courses spring/summer water use
- Water Supply year round use
- Hydropower fall through spring
- Industrial/Food Processing year round
- Agricultural summer water use
- Fish Hatchery year round use

Souhegan Affected Water User Facilities: **Source and Discharge Locations**



Legend

Souhegan Water Users



Source

Discharge

Stream Gages

Active

Inactive

Designated Reach

Hydrology



State boundary



Town boundary

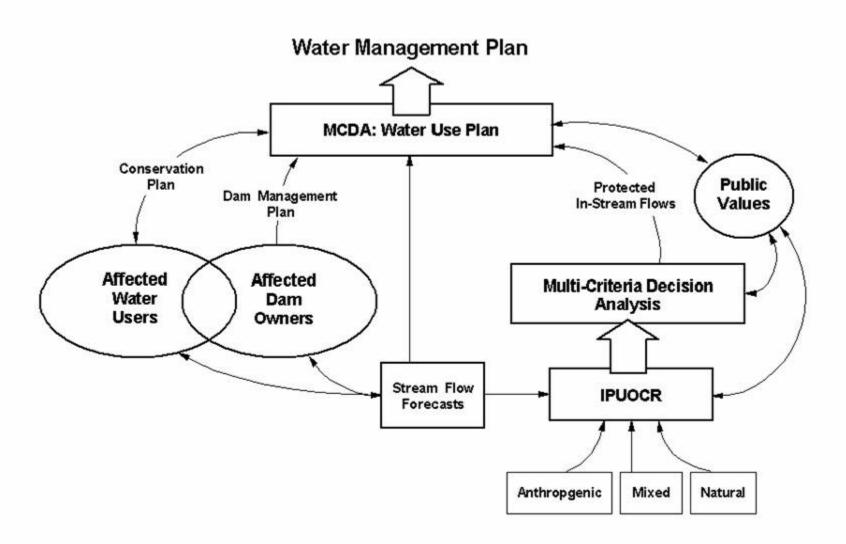


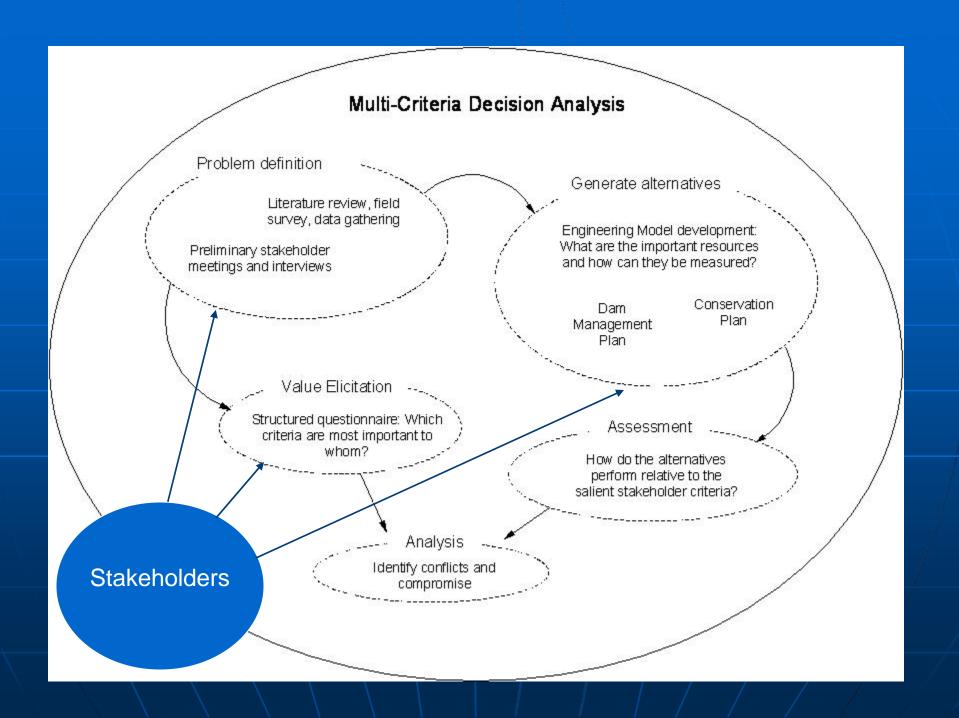
Souhegan WMPA



Water users database last updated January 2004.

interpretation of this information. Not intended for legal purposes.





Analysis: Which stakeholders prefer which alternatives?

